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ABSTRACT

Two studies were carried out in 1991-92 in Brisbane, Australia on the effects on frail elderly people of cognitive challenge by teleconference. In the first study, 20 residents of aged care centers watched specified programs on television. Later, they discussed the content over the telephone using conference link equipment. The study found that the technology must not interfere with the program; that the frail elderly participants should not have to turn on a program at a specific time, but should have readings or tapes that they can use at will; and that the substance of the program should be varied in order to appeal to as many people as possible. In the second study, the program content was specifically developed for the participants, 18 randomly selected frail elderly people who were all living independently in their own homes. Teleconferencing was used to provide the content, as well as for discussion. All participants stayed in the program through 144 participatory hours; results suggested that teleconferenced programs, along with an increase in social contact, can improve the quality of life for the frail homebound elderly. Includes 23 references and 6 appendices containing: participant and staff questionnaires; a participant health status report and a program of activities for the second study; and a description of the "University of the Third Age" (U3A), a higher education format designed to remove most institutional impediments to participation by the aged. (KC)

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A study of teleconferencing as a medium for improving the quality of life of the frail elderly

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A STUDY OF TELECONFERENCING AS A MEDIUM FOR IMPROVING THE QUALITY OF LIFE OF THE FRAIL ELDERLY

ABSTRACT

This paper reports on two studies carried out in 1991/92, into the effects on frail elderly people of cognitive challenge by teleconference. In the first study, residents of aged care centres watched specified programs on television. Later, they discussed the content over the telephone using conference link equipment. In the second study, the program content was specifically developed for the participants who were all living independently in their own homes. Teleconferencing was used to provide the content, as well as for discussion. A number of important findings about the potential of teleconferencing for improving the quality of life of frail elderly Australians were revealed by the studies.

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A STUDY OF TELECONFERENCING AS A MEDIUM FOR IMPROVING THE QUALITY OF LIFE OF THE FRAIL ELDERLY

BACKGROUND TO THE STUDY

Recent reports have observed that the demands that flow from the ageing of the Australian population could generate social and political tensions between aged dependents and taxpayers (EPAC, 1988; Foster, 1991). However, an ageing society need not become an increasing burden on taxpayers if suitable alternatives to the aged dependency model are developed. At the conclusion of the landmark twenty year longitudinal study involving cognitive challenge with a group of older Australians, Harwood (1988) noted that if the independence of the ageing population could be maintained and their mental function appropriately stimulated, significant economic benefits would accrue. The ability to control one's social and physical environment are believed to be crucial to the maintenance of a degree of independence and physical and psychological well-being. Loss of perceived control in the elderly (and subsequent helplessness) can effect life satisfaction, self-esteem and even physical health - all key dimensions of quality of life (George and Bearon,1980). Just as wellness can erode under conditions of adversity, it may be enhanced by favourable conditions or processes. The challenge is to identify factors that advance or restrict wellness and quality of life (Mulkay et al, 1987), and to quantify them (Torrance, 1986). For example, empowerment may be fundamental to wellness. If so, one primary tool to enhance wellness is the promotion of policies and conditions that enable people to gain control over their lives. The current problem facing older Australians has been highlighted by Graycar (1989) who noted the anomalous situation in which the community ethos is to promote independence whilst many Australian programs treated ageing people as dependents.

Cognitive Challenge, Social Networking and Health Status.

A link between cognitive challenge and good health in later life is emerging. For example, aged residents of a nursing home who were given activities that required increased cognitive challenge were found to be less likely to have died or have been hospitalised two and a half years after the study concluded (Langer et al., 1984). Wolf (1987) observed that stimulation can revitalise and rehabilitate cognitive capacity when neural changes have occurred. Quality-of-life issues also appear to be related to health in later life, for example lives may be enhanced through social networking, either through formal or informal networks (Chappell and Blandford, 1991; Miller and McFall, 1991, Tennstedt and McKinlay, 1989). Counte and Glandon (1991), and Griffith (1985) observed that various forms of social support have both a direct and a "buffering" effect which improved health and well-being. Similarly, Thompson (1989) found a relationship between respondents' perception of health and their desire for more people to talk to. Other evidence strongly suggests that there is a positive relationship between a supportive network and a person's ability to cope with stressful problems. (Cohen & Syme, 1985). It is possible, therefore, that suitably developed educational programs for some groups of older Australians may improve their health status (or maintain current health) through cognitive challenge and by increasing social contact (see, for example, preliminary work by Elsworth, 1988).

The housebound frail elderly comprise a large group of Australians whose circumstances tend to drive them into greater dependency. Kendig (1986) estimated that 17 per cent of persons aged 65 or over had a disability which rendered them incapable of either self care or mobility outside the household. Of this group, some 70 per cent remained in home care, which was far more cost-effective than institutional care. Therefore, from both ethical and economic considerations it would benefit Australia if relatively low cost means could be found of prolonging/maintaining better health and quality of life amongst the frail elderly.

Teleconferencing for older people.

A relatively new way of improving the quality of life experienced by the frail elderly might be through the establishment of groups which 'meet' regularly by telephone. The idea of teleconferencing as a means of linking groups of older Australians was investigated in the early '80s by Job (1991). At that stage the technology was insufficiently robust, and a number of problems relating to service interruption and voice fading led to premature cessation of trials. In 1985 the Do Care Telelink Program was introduced by the Wesley Central Mission as a pilot for older residents of Melbourne. The success of this early trial resulted in an expansion of the program in 1989 to provide continued learning, information sharing, advocacy, and emotional and social support for older people. Volunteer tutors are currently providing a number of different courses in the Telelink program which is, reportedly, very favourably received by the older participants (Samulenok, 1990). The Do Care Telelink Program shows that teleconferencing can enrich the lives of some frail elderly people.

Teleconferencing is a very inexpensive medium by which a number of people from distant locations can 'meet'. As a rough rule of thumb, a 60 minute teleconference session in a local region (i.e. no long distance connections), using current Telecom equipment, costs about $8 per person. Thus, a 60 minute conference involving, say, 6 people costs about $50 per hour. Savings in time, cost of travel, and the convenience of meeting from one's home or place of work suggest that meetings utilising modern communications technology will become an increasingly commonplace replacement for face-to-face meetings.

On the face of it, teleconferencing would appear to hold considerable potential for enriching the lives of the frail elderly. It is difficult to conceive of a cheaper way of providing groups of frail elderly persons with the opportunity to talk to each other and perhaps of acquiring new information on a regular basis. The Telelink program shows that a self-selecting sample of older Australians can benefit from new technology. However, nothing is known about the effectiveness of the medium for meeting the wants and needs of the frail elderly population in general. The increasing number of frail elderly in our society, which is the inevitable concomitant of the ageing of the Australian population, argues for the timeliness of studies aimed at revealing the benefits and limitations of teleconferencing as a complement to, or replacement for, more expensive means of supporting the frail elderly in their homes.

This report outlines two teleconferencing trials and begins the process of documenting some of the benefits and limitations of teleconferencing as a means of enriching the lives of frail elderly people.

Definitions. The following terms are defined as they relate to this study.

Teleconferencing is the process by which a number of frail elderly people in different locations are connected by telephone so each can hear and talk to others in the group.

Teletutorials involve the organised exchange of information during a teleconference amongst a number of people.

Teletutors are responsible for the organisation and management of teletutorials.

Trial 1. Cognitive stimulation by teleconference for residents of Aged Care Centres

Summary of Trial 1 Frail elderly residents from two Aged Care Centres in Brisbane were asked to watch a weekly educational television program in their own rooms. Subsequently, groups of five residents and a teletutor were linked by telephone for a 45-60 minute discussion of matters related to the program. A research assistant with training in gerontology interviewed participants throughout the duration of the nine week program to determine their perceptions of the trial.

Aims of Trial 1 The principal aims of the research were:

- to develop an understanding of the limitations and advantages of teleconferencing technology for frail elderly people; and

- to assess perceptions and needs of frail elderly groups using teleconferencing for the first time.

METHOD

Participants

In June-August 1991, 20 residents from Yurana and Carramar Aged Care Centres in Brisbane took part in a nine week program of cognitive challenge delivered by teleconference. Potential participants were selected by Centre personnel on the basis of their likely interest in the trial. The only screening criteria were that participants should show no signs of dementia and should be physically able to take part in extended telephone discussions. A research assistant, who was a practising nurse with training in gerontology, met with each of the nominated individuals in the privacy of his/her own room to explain the nature and aims of the teleconferenced program, and to determine whether the individual was interested in taking part in the trial. Of the initial 20 interviewed, 14 expressed a willingness to take part. Six other residents subsequently agreed on the condition that they could discontinue if the program was of no interest to them. (This proviso applied to all participants.) Thirteen of the volunteers were in their eighties; seven were in their seventies. Sixteen were female.

Background information

Health: The health status of participants was not investigated in detail. However, four exhibited obvious health/behavioural problems (Arthritis, Parkinson's Disease, Chronic Obstructive Airway Disease and Depression). Two additional participants had marked mobility problems (one was confined to a wheel chair) and another had severe hearing loss. When asked to rate their health on a 4 point scale, relative to others of their age group, two rated their health as poor; six as fair; five as good and four as excellent.

Education: Eight participants had completed primary school; two had started but not completed high school; eight had completed secondary school; two had completed tertiary studies. Four had never taken part in a voluntary activity involving more than ten hours instruction; 13 had done so more than ten years ago; three did not provide information on this question.

Data gathering

At fortnightly stages throughout the trial, participants were interviewed to determine their reactions to the program. A number of the interviews were tape recorded and the data were subsequently analysed. However the majority of data came from unstructured or

semi-structured personal interviews which were recorded in a diary immediately after the interview had concluded. Questionnaires were used at a number of stages to assess participants' lifestyle satisfaction, and their general attitudes towards teleconferencing. Staff were also surveyed to determine their perceptions of the impact of the teleconferences on residents.

Program delivery

The majority of the limited funding available for the trial was taken up by the appointment of a research assistant whose principal role was to interact closely with the participants throughout the period of the trial. As a consequence, funds available for program preparation and delivery were limited.

a) Costs of preparing and delivering cognitively challenging program content were largely bypassed by linking the focus of the teleconferences to the 1991 ABC education series 'A new world for sure'. These programs were telecast weekly from 11 - 11.30 am on Fridays on Channel 2 throughout the period of the trial. Participants were asked to watch the telecasts on their own TVs. The following week groups of five participants and a teletutor took part in a 45-60 minute teletutorial using the content of the TV program as a stimulus for discussion.

b) Costs associated with the running of each teleconference were overcome by using volunteer teletutors. Eight female University of the Third Age (U3A) members volunteered to take part in training sessions to prepare them to act as teletutors. (See Appendix F for a brief description of U3A.) The training sessions involved theory sessions on how to manage and participate in the delivery of trial teleconferences. The teletutors also used video tapes of the ABC program to become thoroughly conversant with the content themselves and to develop questions to stimulate discussion amongst their frail elderly groups.

c) Teleconferencing costs for the four groups of five frail elderly participants and their teletutor, for 60 minutes a week for 9 weeks, would have been nearly $2000 using Telecom equipment. Instead, for the period of the trial, U3A-Brisbane provided the funding to cover the hiring cost of a Confertel Bridge ($720), which is owned by a private organisation. The bridge combines up to 10 telephone lines so that all participants can hear and talk with each other.

The mechanics of the teleconference

At a previously agreed time five participants and their tutor, each from his/her own room, phoned the bridge. (Although up to ten people can use the bridge at any one time, groups were restricted to five to ensure that all participants would have several opportunities to talk.) The tutor would welcome arrivals and chat for a few minutes until all members had joined the conference. Once the session had begun the tutor would raise a question for discussion and invite each participant in turn to take part in the discussion. All participants had colour photographs of the tutor and of other members of the group to act as memory aids and to remind them of the order of speaking. It was important that participants only spoke when invited to by the tutor. The reason for this was that the Confertel Bridge would select the loudest voice and filter the others out. Thus, if two or more people tried to speak simultaneously, only one voice would be heard by the listeners. Other speakers would not know that their contributions had been 'drowned out'. (This problem is not encountered with modern Telecom teleconferencing equipment.) Participants could hang up from the conference at any time or re-enter by again phoning the bridge.

RESULTS AND DISCUSSION

Survey methods

i) Questionnaires
The instrument initially selected to evaluate participants' life satisfaction was the Salamon-Conte Life Satisfaction in the Elderly Scale (LSES). This questionnaire comprised 40 items, each requiring the participant to respond on a five point Likert scale. The 40 items are factored into eight subscales comprising different components of life satisfaction (daily activities, meaning, goals, mood, self-concept, health, finances, social contact). The scale was developed in America. A number of participants were very critical of the nature and perceived relevance of some of the questions. This criticism suggests that LSES may be inappropriate for use by frail elderly Australians, at least in its present form. Alternatively, since LSES was given only at the beginning of the program, it may have been better received once the research assistant had gained the trust and confidence of participants. Regardless, LSES was discontinued as a possible means of determining change scores throughout the program.

A questionnaire developed specifically by the researchers to evaluate aspects of the trial was more favourably received since participants could perceive the relevance of most of the items. (See Appendix A).

The questionnaire given to staff to complete met with mixed responses (Appendix B). One staff member commented '...there's no way I'd go sticky beaking - what the residents in the Independent Living Units do is their business'. If additional teleconferencing trials are undertaken with frail elderly residents of centres, it is recommended that perceptions of staff about participant behaviour may be better obtained through personal interviews.

ii) Personal interview
Unstructured interviews, in which probing questions were kept to a minimum, were perceived by the research assistant to be the most effective means of gathering information from the frail elderly. Participants reportedly relaxed during the interviews and did not appear to feel threatened. This reaction was in contrast to the negative attitudes encountered during administration of LSES. A semi-structured questionnaire was used half way through the project to elicit and standardise information from all participants. The use of a tape recorder during the interviews was acceptable to a number of residents. If residents appeared anxious about tape recorded interviews, notes were taken during the interview and written up in a diary at the conclusion.

Problems associated with the methodology

• *Participants forgetting to join the teleconference.* A number of participants forgot to phone the bridge at their designated time. This problem was overcome by the teletutors working in pairs. If members of the group had not joined the conference by the designated time the 'back-up tutor' would phone the missing members to remind them to phone the bridge.

° Possible solution: An 'operator' at the bridge site should phone each participant at the designated time and allow them to chat to each other until all have joined the conference

• *Participants forgetting to watch the stimulus material.* Several participants forgot to watch the ABC programs. Of itself this was not a major problem since the sequence of programs dealt with major aspects of Australian life in the early and middle part of this century. The teletutors had developed a range of 'open' questions designed to stimulate participants to talk about their own experiences. The nature of the questions, and other

participants' responses were often sufficient to stimulate wide-ranging discussion, regardless of whether or not individuals had watched the program.

° Possible solution: Cognitively challenging programs for older people must be flexible in terms of time demands. Radio and television programs are not sufficiently flexible since they occur on a 'one-off' basis. It may be best to incorporate the program of cognitive challenge into the teleconference itself (e.g. through brief telelectures which are immediately discussed) or by sending out readings or tapes which can be used at the convenience of the participant. Special care must be taken with people with degenerative memory loss illnesses.

• *Perceived inappropriateness of programs.* The initial programs had a very heavy political emphasis with lengthy discussions and analysis of the Labour Party schism, the Petrov affair, Communism in Australia, the great coal strike etc. All of the female participants were of a generation in which males alone had interest or involvement with politics. Three participants pulled out of the program after two sessions, reportedly because of the 'boring' nature of the content. Others expressed concern about '...rehashing old memories'.

At the conclusion of week four a morning tea meeting was held to introduce a major change to the remainder of the trial. Since the order of programs shown on the ABC could not be changed, the TV series was dropped and the teletutorial focus was replaced by current affairs discussions over the telephone. Tutors developed questions from the weekly news or topical items such as immigration, multicultural Australia, the drug problem etc., which many older adults were likely to have opinions about. The content change was initially well received, but numbers continued to decline throughout the remaining sessions. A number of participants continued to express boredom with the content.

° Possible solution: A diverse group of frail elderly participants is unlikely to share common interests which excite everyone. Frequent variation of the topic for discussion may be necessary.

Problems associated with the technology

• Problems with the bridge resulted in frequent complaints. When operating at its best, conversations through the bridge sounded somewhat quieter than those experienced during a normal telephone call. Sometimes some voices would fade to an almost inaudible level for a few seconds. For three of the participants with hearing problems, the inability to hear the others was a continual source of frustration. On occasions individual lines would drop out and affected participants would have to redial the bridge. Two participants reported that when they phoned in late they could not contact the bridge, despite frequent efforts. This difficulty may have been due to problems with the bridge. An alternative explanation is that since the bridge can cater for a maximum of 10 participants, all of the spare lines may have been taken up by silent listeners from other groups. On one occasion operators of the bridge forgot to turn the equipment on.

° Probable solution: Older teleconferencing equipment should not be used with frail elderly people unless their commitment to the program is very strong and they are prepared to put up with problems associated with the equipment. In absolute dollar terms, commercial alternatives are more expensive. However, when hidden costs are considered (participant disenchantment, volunteer effort etc.) it may be false economy not to budget for the best technology available. Current Telecom bridge equipment is robust; lines rarely drop out and voices are so well amplified that teleconferences sound like normal phone calls. Only people connected by the operator can join the teleconference.

Reasons given for dropping out

Initially there were 10 participants from each of the two Centres, five of whom were from Independent Living Units and 15 from the hostel sections. After the first week, three volunteers who had elected not to take part in the first teleconference, decided to withdraw totally from the program and were replaced by two others. Other participants dropped out at various stages of the project. Table 1 summarises the stages of the project when the volunteers dropped out and the stated reasons for discontinuing.

Table 1: Participant reasons for discontinuing

Week	Volunteer	Principal reason given
Week 1	B *	Times didn't suit
	E	Too old to bother
	L	Times clashed with other activities
Week 2	A	Hospitalised
Week 4	F3	Poor health
	B5	Program too boring
	B4	Poor health
	F1	Too many other commitments
	T	Poor health (rejoined week 6)
Week 5	J	Hospitalised
Week 6	B1	Prefers face-to-face;

* confidential code

Further probing revealed there were other factors operating which influenced decisions to discontinue the program. For example, one male resident gave 'health reasons' but the Centre staff indicated that he was frequently depressed and grieving over the loss of his wife. This man also reported that his phone had a bad connection which meant that he could not keep up with the conversation. This participant tended to withdraw from group conversation (both teleconferenced and face-to-face) and let others do the talking, yet on a one-to-one basis he appeared to be quite happy to communicate and expand on his views. He also stated that he '...felt left out of the conversation' as the only male amongst a group of women.

One person who cited health problems as a reason for discontinuing also revealed that she felt others were dominating the conversation. Another female who dropped out on the fourth week because the program was 'too boring' was essentially a shy and reserved person. She admitted that she took a while to get to know people and would have preferred a lengthened introductory teleconference session (during which people spoke about themselves and their lives), to allow her to get to know the group members individually. The remaining female who dropped out with reasons other than 'health problems' stated that the time was inconvenient and she had too many other commitments. The reason she gave to other participants, however, was that the project was boring and she just wasn't interested.

Reasons given for persevering

Eleven of the original 20 participants took part in six or more of the nine sessions. Their principal reasons for staying with the program are summarised in Table 2.

Table 2: Principal reasons for persevering

Volunteer	Principal reason given
C *	Felt commited to stay in. Liked politics/history
F2	Interested. I like to help and thought it would help others
B6	Don't like to give up. Plugged along to see how it would end
M	Commitment. If I start something I like to finish it
G	Curious to see how it would finish up. Happy with the program. Current affairs more interesting. Became more interested as time went on. Liked the tutor - she kept to the point
N2	Enjoyed it after politics. Commitment; I'm helping other people
M3	(Hearing problem). Don't allow anything to beat me. Never like to commit myself unless I can carry it out. Would have continued it if I could have heard properly; it was interesting
B2	Enjoyed listening to other people's points of view
P	Kept my interest up till the last; makes you stop and think. I enjoy learning and am making up now for what I missed out on
N	Enjoyed sessions. Wanted to see outcome
T1	Wanted to be helpful; daughter at university.

* confidential code

Two of the participants attended every session and made positive comments throughout. These two had a stated interest in history and current affairs. One stated '...it was a pleasure to ring in and join the others' and hoped the program could continue past the due completion date.

A number of other volunteers were 'lukewarm' about the whole project and participated while enjoying some sessions and finding others boring. Three of the participants who were non-commital earlier, or registered an early lack of interest in the program, showed increased signs of interest and involvement as the program progressed.

When asked whether they would be interested in taking part in other educational trials seven replied no; five thought they might if it did not involve teleconferencing; five said yes.

Other findings

• Three participants privately expressed a fear that, since a university was involved with the program, they were being listened to by students. (This was not the case.)

• Most of those who dropped out were in their 80s and had health problems.

• Many of those who missed occasional sessions did so primarily because of health reasons. Other sporadic absences were caused by participants preferring to take part in social activities organised by the hostels.

• Questioning by the research assistant of participants who were identified by the tutors as rarely wishing to speak, indicated that they had been listening closely and were very interested in the views of others. Three 'passive' participants remained with the program throughout. Thus, it would appear that some frail elderly people may benefit from teleconferencing without wishing to actively contribute to the discussion.

• Face-to-face contact. Three social/information get-togethers were arranged. These meetings took place immediately prior to week 1, during week 4, and immediately following the conclusion of the trial in week 9. Participants stated that they enjoyed

these meetings, thought they were valuable in helping to 'unify' groups and believed they provided the opportunity to get to know their teletutors and others in their groups. Surprisingly, most of those who had dropped out of the teletutorials came to the three meetings. For some, these social gatherings were more important than the teleconferences.

• One male participant, who was perceived by fellow residents and staff as aggressive and short tempered expressed satisfaction with the entire program. He indicated that he felt little in common with other residents of his Centre. The program made him think and he enjoyed being given the opportunity to express his ideas freely over the phone.

• Two of the most enthusiastic participants joined U3A at the completion of the trial.

• A number of comments made by those who dropped out revolved around feelings of being left out and irritation at others dominating conversations.

• Contrasting comments suggest that programs may be difficult to devise which meet everyone's expectations. Statements like '...what's the point of rehashing the past and going over spilt milk' and '...it's interesting going over the past and stimulating old memories' reflect the diverging interests of participants.

The teletutors' role

The eight volunteer teletutors from U3A were fundamental to the implementation of the trial. Five had been teachers in earlier times; four had also been tutors for various U3A groups. None had previously heard of teleconferencing but had volunteered because of their desire to learn new things.

The teletutors undertook a training program comprising the theory of communicating at a distance, and management of teleconferences. Training teleconferences were run in which the tutors took the role of both student and of tutor in order to get a feeling for some of the limitations of teleconferencing as an interactive medium.

The tutors previewed video tapes of the TV programs which were to be used as stimulus materials for the frail elderly and developed and tested 'open' questions designed to encourage participants to respond with other than yes/no answers. The process of preview and question development was time consuming so the tutors initially worked as two groups of four. Half the tapes were previewed by each group and questions were pooled for subsequent use by all.

A morning tea meeting for all participants and tutors provided the opportunity for face-to-face contact before the start of the program. The tutors later indicated that this meeting was very important in helping them to deliver their questions and prompt participants during the teleconferences. They observed that some members of the groups appeared to be quite forgetful or vague; others tended to be slow in responding to questions, or spoke quite slowly; and others were lively, alert and outgoing. This knowledge of individual differences allowed tutors to understand that delays or pauses in responses by some individuals did not necessarily warrant immediate input by the tutor.

Tutors had a variety of styles. Some were very businesslike and to the point; others were 'chatty' in their presentations; a few tended to inject their own personal anecdotes or reminiscences into the discussion. The tutors learned to interrupt politely if a responder had spoken for more than two minutes or was 'wandering off' the topic. The only minor difficulty with style was a tendency by some to interject frequently with normal telephone conversation voice cues such as 'I see', 'yes', 'isn't that interesting' etc. Such comments tended to isolate the group by placing the tutor rather than the group at the focus of the discussion. Regardless of style, the tutors were well rated by the participants.

At the conclusion of the trial a meeting was held with the teletutors to gauge their overall feelings about teleconferencing with frail elderly people. The general feeling was that much had been learned during the trial and, with modification, the method appeared to have considerable potential for enriching the lives of lonely or isolated people. All tutors volunteered to take part in Trial 2.

CONCLUSION

Three outcomes are clear from Trial 1.

- The technology must not interfere with the program.

- The program should not depend on frail elderly participants having to undertake a specific activity (such as watching a TV program or listening to a radio broadcast) at a set time. If enrichment materials are used they may be better in the form of readings or tapes which can be accessed at a time which suits the participant.

- The substance of the program should be varied in order to appeal to as many people as possible.

The findings from Trial 1 informed the procedures used in Trial 2.

Trial 2. Cognitive stimulation by teleconference of a 'quasi-random' sample of housebound frail elderly

Summary of Trial 2 In January/February 1992 eighteen randomly chosen, frail elderly residents living in suburban southern Brisbane took part in a trial teleconferencing program to test the feasibility of using teleconferencing to enrich their quality of life. All participants were chosen from lists of clients held by home support organisations. A quality of life assessment instrument was developed and trialled and the effects of the program of cognitive challenge on participants' social life and health status were measured. All participants experienced one or more disabling health problems and more than half had only a primary or limited secondary school education background. Despite these seeming major impediments to participation, all eighteen remained in the program throughout its duration.

Aims of Trial 2 The principal aims of the research were:

- to identify characteristics of teleconferenced programs which encouraged participation by housebound frail elderly people
- to obtain quantitative and qualitative data about participants' reactions to teleconferencing
- to begin to develop an instrument which may aid in the assessment of participants' quality of life.

METHOD

Participants

A 'screened' list of forty volunteers was obtained from key community support personnel at Home and Community Care Program (HACC) at South Brisbane and Annerley Community Care Centre. The initial screening criteria requested that participants be frail elderly, be living at home, be receiving some form of regular support from a caring agency, have a phone, be able to hear reasonably well, could read, and not be suffering from dementia. Within these constraints it was intended that volunteers would be randomly selected to take part in a teleconferencing trial designed to improve their quality of life. An element of bias was possibly introduced into the screening process by well-meaning support personnel who encouraged participation from those whom they believed would benefit most from the program, for example, depressed and socially isolated people. Thus, the list included an unknown number of names of possible participants who were not randomly chosen from client groups. Eighteen potential participants were randomly selected from this quasi random list of 40 and the details of the program were explained to each individually (Appendix E). Three declined to become involved and were replaced by three others on the list. Sixteen of the eighteen participants were female.

Data gathering

A research assistant with skills in gerontology and nursing the elderly was hired for the duration of the program. The research assistant had prior understanding of teleconferencing procedures for frail elderly persons through her earlier involvement in Trial 1. Her role was to interact closely with participants throughout the program, monitor the teleconferences and collect information relevant to the aims of the trial.

Volunteers were visited before the start of the program, a quality of life questionnaire was developed and administered, a health assessment was performed, and the

teleconferencing procedure was explained. Individual photographs were taken and copies of these were sent to everyone in the group as an aid to speaker identification during the teletutorials. One participant declined to be photographed but remained in the program.

Weekly contact was maintained with participants throughout the program, either by phone calls, visits, or by mailing of information on forthcoming topics to be discussed during the teletutorial. Questionnaires and semi-structured interviews were used to elicit information on health status, support services used, levels of life satisfaction and changes over the period of the program. At the beginning of the project, participants were asked to fill in a questionnaire which included questions about daily activities, social contacts, present state of health and support services utilised. (A copy of the questionnaire is included in Appendix C). A diary was kept by the research assistant with comments about phone calls, visits, and details of weekly participation. At the end of the project, the participants were asked to repeat a slightly modified version of the initial questionnaire (for example, the tense of some questions changed) and answer additional questions about the program (Appendix A).

Program Delivery

Prior to the first teleconference, participants with hearing problems were identified and efforts were made to maximise their ability to hear. This process involved Telecom checking the clarity of the lines and rectifying interference problems. Literature was also sent to three people with hearing impairments, informing them of the availability of phone aids and hearing attachments. Before the start of each weekly program, a phone link-up with the participants and the chairperson was made by Telecom, and any source of background noise identified and, if possible, minimised.

The eighteen participants were divided into three groups of six; each group taking part in one teleconference a week chaired by a volunteer tutor from U3A. All the volunteer tutors had taken part in Trial 1. At a designated time an operator from the Telecom Conferlink service would phone each of the group participants, the tutor and the research assistant. Individual group members were placed on 'hold' until all members were present. Once all members of the group had been connected, the operator would conduct a 'roll call' and advise those groups who had given prior permission, that their sessions were being recorded. (Two of the sessions were taped.) The operator then handed over the session to the tutor and left the conference. After introducing herself, the tutor would begin the program of cognitive challenge.

The content varied substantially each week: Current affairs, Australian heros and heroines, Changes in Australian society, Poetry from our youth, Nutrition and health, Theatre and drama in the 50s and 60s, Medicare and social services etc. Sometimes the tutor provided the program content; on other occasions guest speakers joined the teleconference and the tutor acted as the discussion moderator. For one session participants were mailed some preliminary reading which they were then asked to discuss during the upcoming conference. Each conference ran for about 60 minutes. In all cases the tutor was sensitive of the need to involve participants in discussions. After several minutes of content delivery the tutor would invite each participant by name to respond to questions about the topic before proceeding. Although all participants were able to hear and talk to each other, tutors generally discouraged conversations between individual members of the group. This 'ground rule' was to prevent more confident members of the group from dominating quieter members. If an individual response exceeded two minutes, or if the individual diverged substantially from the topic, tutors were instructed to politely interject and move on to the next person in the group. A different tutor was involved with each weekly session.

Group permission was obtained for the research assistant to be a silent listener in all sessions. The role of the research assistant was to evaluate each of the sessions and to

assist the tutors if any difficulties occurred. The research assistant was also able to assist tutors with inter-personal techniques which had been particularly effective in earlier sessions and with individual participants who might experience some difficulties.

RESULTS AND DISCUSSION

Participant Characteristics

Age: The age range of participants varied from 58 to 92 years. The average age was 76.8 years.

Health: All 18 participants had one or more disabling health problems; sixteen visited a medical practitioner regularly. Most were able to perform light household duties; all were dependent on at least one HACC service. Psycho-social health information was also obtained, but underlying attitudes were often difficult to 'pin point' by the research assistant. However comments from relatives and health care providers provided useful complementary data which helped to substantiate many of the qualitative observations made throughout the study. A minority of participants were openly angry about their housebound situation. Others did not admit to being anxious or depressed, including those who were more severely housebound. These latter people appeared to wish to portray an image of 'coping' and being contented. When asked to rate their health on a 4 point scale, three rated their health as poor; seven as fair; and seven as good and one person did not respond. (Participant health information is detailed in Appendix D.)

Social activities: The most common single weekly social contact for most participants was Day Care at a local centre. This was usually the only social outing for the week; one person attended a Day Centre twice weekly for physiotherapy which was also her only outing. Five participants rarely left their home environment and did not attend regular activities. These people occupied themselves by reading, watching TV or playing cards. The main reasons for not taking part in outside activities were their medical conditions and limited mobility. In addition, many expressed a lack of interest in the activities in the local area. One person rarely ventured out due to a fear of falling. Four of the nine who rarely went out socially except to Day Care, stated that they were content to stay at home.

Family support: Seventeen of the participants lived alone at home. Nine received regular visits from their family together with instrumental support. Four had no family support and few friends or neighbours to depend upon. (Appendix D.)

Education level: Nine participants had completed primary school; two had completed less than two years high school; two had completed high school and five had a certificate or tertiary qualification. Ten had never undertaken a voluntary course in the past (i.e. no continuing/adult education) while eight had completed a voluntary course, but for all this was more than ten years ago.

The Program of Cognitive Challenge

Presentation skills. The skills of the key speaker and his/her ability to speak well on the telephone, were important for developing an atmosphere conducive to communication among the frail elderly. For example, the 'Drama' speaker, who was experienced in communicating with groups of senior citizens, was very proficient in stimulating people to remember and recount memorable occasions. This specific program format also had a balance of structure and spontaneity. In contrast, after one session with a different guest speaker, one participant expressed the view that the group were '...being talked down to'. It should be pointed out, however, that teleconferencing is relatively unknown to most people. Consequently, it is unreasonable to expect that those unfamiliar with the technology will feel immediately comfortable with the medium for communicating with older people.

Program variety. At the conclusion of the trial, participants were asked to give a numerical rating to each of the sessions on a 10 point scale. Means and standard deviations of responses are summarised in Table 3. The abbreviation G/T indicates that the program was presented by a guest speaker (G), with tutor management, or (T) when the entire program was conducted by the tutor.

Table 3. Participant rating of programs (Ten point scale)

Topic	G/T	Mean	SD
Introduction	T	8.1	2.0
Nutrition and health	G	7.6	2.0
Current affairs	T	8.8	1.3
Heros and heroines	T	7.4	1.2
Drama in the 50s and 60s	G	8.1	2.0
Australian society	T	8.1	1.3
Poetry from our youth	T	7.8	1.6
Medicare and Social Services	G	6.1	2.6

The quantitative ratings in Table 3 were taken at the end of the program when the specific detail of some of the earlier topics may not have been easily recalled. All topics, with the exception of 'Medicare', were well rated by participants. Qualitative assessments of each of the topics were sought shortly after program delivery and these comments provided additional insights. The 'Nutrition' tutorial created considerable interest and led to six participants changing their diets. 'Drama in the 50s and 60s' was also rated very highly by all but one participant. Each of the guest speakers in the 'Nutrition' and 'Drama' sessions had considerable prior experience of interacting with ageing people, whereas the guest speakers in the 'Medicare' program did not. A lack of understanding of the circumstances of frail elderly people may have been, in part, responsible for the majority of participants regarding the Medicare material as 'boring and irrelevant'. Other topics which everyone could relate to easily were 'Current affairs' and 'Changes in Australian society'. Most participants commented very favorably on these types of program because they '...had something of interest for everyone'. 'Heros and heroines' and 'Poetry from our youth', appeared different from the other topics in that they were the most obviously 'academic' topics in the series. To prepare for 'Heros and heroines' participants were asked to read a very brief article which was mailed to them a few days before the session. Both sessions were also well rated by participants, although some of those with limited formal education experience appeared less comfortable with the idea of preparatory reading. It is interesting to note, however, that the only person who gave a 10 rating (the highest possible) to 'heroines', and the three who gave 10 ratings to 'poetry', had primary school listed as their highest level of formal education.

Several participants commented on the interesting range of topics and noted that if something appeared boring there was always something good to follow. The diverse backgrounds and interests of frail elderly people appear to suggest that variety is an essential prerequisite for continued participation in a teletutorial.

Participation by a person handicapped by a speech impairment. One of the two males suffered from a disease which gave rise to a severe speech impairment, which made understanding difficult. Despite this impediment, the group dynamics remained sound. Members of the group were frequently monitored to determine their reactions. Comments such as:

'...he's a battler, difficult to understand, and labours a lot';
'...he has his say and does his best'; and
'...he was quite good (this week), he didn't get off the track'

point to a tolerant attitude towards this 'different' group person. One participant stated she had met the man at the introductory morning tea and became aware of his disabilities. This had given her '...a genuine understanding of his difficulties'.

Social gatherings. On three occasions participants were brought by taxi to a convenient and hospitable meeting venue which catered for the frail elderly. The social gatherings were reportedly beneficial to the majority of participants because of the face-to-face contact. Only three people were unable to attend the morning tea sessions, all for medical reasons, for example, one was on continuous oxygen. These social occasions helped to promote group cohesion and provided the opportunity for participants to meet their teletutors. On the first two occasions slide travelogues were provided as entertainment by one of the tutors. On the final day the participants themselves elected to provide the entertainment in the form of a concert. All participants gave an item. The majority recited or read brief poems which, reportedly, had been inspired by the session 'Poetry from our youth'.

Quantitative outcomes

Health status. Changes in health status and informal and formal support services utilised were assessed. T-tests were run on before/after responses to selected items from the mental/social/health questionnaire (Appendix C). Bonferroni protection was used to minimise the possibility of Type 1 errors. Only the comparison between numbers of visits by nurses in November and February was significant (Prob = 0.006). This result should be treated with caution, however, because no attempt was made to determine why participants were visited less frequently by nurses during the latter half of the program.

Participant responses to teleconferencing.

Participants were asked to rate 16 items about the teleconferencing trial on a five point scale (5 = most liked, 1 = least liked). On average, none of the items rated less than 3. Means and standard deviations of the 16 items are shown in Table 4.

Table 4. Participant responses to teleconferencing.

Item	Mean	SD
Liked listening to others in the group	4.7	0.46
Like to talk about many things	4.3	0.77
Enjoyed answering tutors' questions	4.3	0.84
Questions challenged me to think	4.1	0.80
Found teleconferencing to be interesting	4.1	0.42
Like being challenged to think	3.9	1.03
Would enjoy other educational challenges	3.7	0.69
Found teleconferencing to be valuable	3.6	0.93
Found most of the 8 programs interesting	3.6	0.86
Challenged me to think about other things	3.5	0.72
Spoke to others not involved, about teleconferencing	3.4	0.92
I have a lot to do in daily life	3.3	1.19
Liked to have heard tutors talk more	3.2	0.54
8 week program is about right length	3.1	0.42
Morning/afternoon tea talks interesting	3.0	0.73
Program once a week is about right	3.0	0.00

(Items were rated on a 5 point scale: 1 = most negative, 3 = neutral, 5 = most positive)

Qualitative outcomes

A number of positive qualitative outcomes were identified.

• The program of cognitive stimulation was well received by most individuals despite their generally limited educational backgrounds.

• The beginnings of informal networks were established by group members exchanging phone numbers and some telephoned each other independently of the program. One person visited another living nearby.

• Short term behavioural changes were detected through some participants suggesting that the program appeared to be having a beneficial effect on how they felt. For example, one severely housebound person volunteered the statement '...I feel that it (the program) is doing me good'. This view was reinforced by a health care worker at the local Day Care Centre who stated that the participant had developed a more positive and optimistic outlook during the project. Another person stated that she felt '...awful and depressed' before one session '...I felt it (the teleconference) stirred me up - I feel mentally stimulated'. This person suffered from a painful arthritic condition which severely limited her mobility. For the severely physically handicapped male, the program was of great interest and his enthusiasm was remarked on by the co-ordinator of one of the Day Care centres

A number of the more severely housebound participants discussed their feelings of 'upliftment' directly after teleconference sessions. They displayed great interest in the topics and participated enthusiastically in most discussions. A number of relatives and health care providers reported participants' enthusiastic discussions of various topics. An improvement in self confidence and increase in self expression was also noted in many participants by the latter half of the project.

• Thirteen participants stated they would like to take part in other educational trials if the opportunity arose.

• Six participants changed their diet after taking part in the discussion on nutrition.

• During the sessions memories were stimulated. Feedback after the programs showed that a number of participants had had old memories triggered, remembering places, names and events long since forgotten. New ideas were exchanged and people had a chance to express themselves.

Procedural differences between Trial 1 and Trial 2

a) Teleconferencing: In Trial 1 participants were required to phone the bridge at a designated time. In Trial 2 an operator phoned each participant at the designated time.

Gains: No problems were encountered in Trial 2 with either the equipment or participants forgetting their teletutorials. None of the participants complained about shortcomings associated with the equipment.

Losses: The Confertel Bridge used in Trial 1 was provide free of charge.
The cost of the Telecom connected service in Trial 2 was approximately $1500.

Comment: At approximately $8 per participant per hour (1992 rate) teleconferencing is a comparatively inexpensive means of linking groups of frail elderly people. Other expenses associated with the preparation and delivery of the substance of the teleconference need to be considered. The high levels of frustration caused by

problems with the technology in Trial 1 suggest that it may be false economy to undertake 'low budget' teleconferencing activities with the frail elderly.

b) Program content: In Trial 1 a nine week single theme program was planned. Participants were asked to watch an adult education program on TV and later discuss the program in teletutorials. In Trial 2 participants were involved in a pot-pourri of subjects involving different content, tutors and methods of program delivery.

Gains: In Trial 1 complaints about the boring content of the TV-related tutorials, and the subsequent drop out rate, necessitated a complete program change half way through the trial. There were few complaints from participants about the programs in Trial 2 being boring. If participants were not particularly interested in one session, the different content of subsequent sessions acted as an inducement to remain in the program.

Losses: Considerable preparation is needed for a pot-pourri type of program. Guest speakers may require payment. Even in the unlikely event that they are familiar with teleconferencing, guest speakers will have to do considerable preparation.

Comment: It is uncertain how a randomly chosen group of frail elderly would respond to a series of well-run teletutorials on a single issue subject of possible general interest e.g. 'healthy living at home'. Trials should be carried out to see whether a series of in-depth teletutorials will maintain participant interest.

c) Teletutors: In Trial 1 tutors were associated with the one group throughout the entire program. In Trial 2 one tutor was responsible for only one teletutorial session which was run with each of the three groups.

Gains: Some of the tutors were more lively and stimulating than others. Some had specific knowledge of a particular topic and were able to convey their insights to all participants. It was easier for tutors to arrange their schedules to carry out three teleconferences in one week rather than having to be available for the entire program. If a tutor was unavailable, it was comparatively easy for one of the others to substitute.

Losses: In Trial 1 tutors and participants became quite friendly and accustomed to each other's teleconferencing manner. This was not possible in Trial 2; both tutors and participants stated that they would have liked to have had the opportunity to get to know each other better. Tutors who chaired sessions involving guest speakers had very little opportunity to refine their teletutorial skills developed in Stage 1.

Comment: Teleconferencing is a comparatively impersonal way for 'meeting'. Both participants and tutors need to establish a degree of rapport in order for participants to feel comfortable enough to talk freely to others in the group. It may be desirable (but expensive) to arrange a face-to-face meeting before the teletutorials begin.

CONCLUSION

Trial 2 involved the use of unfamiliar technology to introduce a series of mentally stimulating activities into the lives of 18 randomly selected frail elderly people. All participants had health problems (some severe); none had taken part in an educational program during the past ten years (indeed, some had never undertaken any educational activity since primary school), yet all 18 participants stayed in the program. Of a possible total of 144 participant hours, only six participant hours were missed through illness or prior commitment. Most participants would have liked the program to continue. These results stand in considerable contrast with the Trial 1 activity (detailed earlier in this report) which experienced a 50% attrition rate. The lessons learned from

Trial 1, and subsequent program modifications, appear to have been responsible for the impressive outcomes of Trial 2.

Qualitative observations of changes in participant behaviour during Trial 2 suggest that teleconferenced programs which involve mental stimulation, together with increased social contact, can improve the quality of life, particularly of the more severely housebound, in the short term. Positive health/behavioural outcomes such as the dietary changes made by six participants also occurred. Less obvious changes in psychological or mental status were hinted at through the comments of participants and others who knew the participants well, e.g. relatives and care givers. Attempts at quantifying possible health status change over the duration of the trial were not successful; an eight week intervention may have been too short a time to result in measurable outcomes.

In sum, Australia's rapidly growing older population will inevitably result in a sharp increase in the numbers of frail elderly people. It is in the interests of both the frail individual and the nation as a whole if efforts to find the best ways of assisting the frail elderly to maintain their independence in their own homes are increased. Home care is the overwhelming preference of the frail elderly, besides being considerably cheaper than institutional care. Compared with many more labour intensive means of enriching the lives of the housebound frail elderly, teleconferencing would appear to be extremely cost-effective in improving the quality of life. Trial 2 has shown that frail elderly people can benefit from information, social contact and cognitive challengedelivered by teleconference. Further trials aimed at quantifying the benefits appear justified.

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Appendix A

Educational and allied characteristics of participants

Participants of both Trial 1 and Trial 2 completed this item at the end of the respective programs (Text reference page 5 and page 11.)

CONFIDENTIAL QUESTIONNAIRE

NAME: _____

Just tick one box in each line

I like being challenged to think	never	rarely	sometimes	often	always
I found most of the 8 programs were	very boring	of some interest	interesting	mainly interesting	very interesting
The morning and afternoon tea talks were	very boring	of some interest	interesting	mainly interesting	very interesting
I liked listening to others in my teleconferencing group	never	rarely	sometimes	often	always
I like to talk about many things	never	rarely	sometimes	often	always
I enjoyed answering the tutor's questions	never	rarely	sometimes	often	always
The questions challenged me to think	never	rarely	sometimes	often	always
For me, an education program once a week is	much too often	a little too often	about right	too infrequent	much too infrequent
Overall, I found the tele-conferencing trial to be	of little value	of some value	valuable	quite valuable	very valuable
I spoke to others not involved about the teleconference	never	rarely	sometimes	often	very often
I would have liked to have heard my tutors talk	much less	a bit less	I'm neutral	a bit more	much more
An 8 week education program is	much too long	a bit too long	about right	a bit too short	much too short
I found teleconferencing to be	very boring	mainly boring	I'm neutral	mainly interesting	very interesting
I would enjoy other educational challenges	most unlikely	probably not	I'm neutral	probably	very likely
Teleconferencing challenged me to think about other things	not at all	very rarely	sometimes	often	very often
I have a lot to do in daily life	not at all	very rarely	sometimes	often	usually

1 Think back to just before the teleconference trial started. What were your **main** reasons for joining in?
(Number 1 in the box beside the most important reason, 2 beside the next most important etc. Number as many as you like.)

- Curiosity ☐
- To gain new knowledge ☐
- Personal satisfaction ☐
- To mix with stimulating people ☐
- To escape daily routine ☐
- I like to do new things ☐
- To help other people ☐
- Other (please specify) ☐

Please circle the number next to the answer you choose

2 What is the **highest** level of formal education you have completed?

- Primary school — 1
- Less than 2 years high school — 2
- Completed high school — 3
- Business, technical or trade certificate — 4
- Undergraduate diploma — 5
- College or university degree — 6
- Higher university degree — 7

3 When was the last time you voluntarily took part in an activity involving more than 8 hours instruction (eg. a course for a qualification, or a hobby eg. dressmaking or home improvement with no qualification involved)?

- Never — 1
- More than 10 years ago — 2
- 6 to 10 years ago — 3
- 1 to 5 years ago — 4
- Less than 12 months ago — 5

4 Do you enjoy informative TV or radio programs, or reading about things which make you think a lot?

- Never — 1
- Sometimes — 2
- Fairly often — 3

5 Compared with others of my age I perceive my current state of health to be:

- Poor — 1
- Fair — 2
- Good — 3
- Excellent — 4

6 I would like to take part in other educational trials if the opportunity arises.

- No — 1
- Perhaps, but not involving teleconferencing — 2
- Yes — 3

Your comments or suggestions please _____

_____

_____

_____

_____

Appendix B

Staff observations questionnaire

A number of staff in the two Aged Care centres involved in Trial 1 were asked to provide background information about the participants. Some resistance was encountered to this idea (Text reference page 5.)

Observations checklist
beginning the programme

Participant's Name: _____

Please think back to before the programme started and mark a number for each item, for each participant, on the 5 point scale.

1. enjoys shopping and similar physical activity	1 *Never*	2	3	4	5 *Always*
2. enjoys socialising with others	1 *Never*	2	3	4	5 *Always*
3. talks to others about everyday life	1 *Never*	2	3	4	5 *Always*
4. makes suggestions to staff	1 *Never*	2	3	4	5 *Always*
5. appears unhappy and withdrawn	1 *Never*	2	3	4	5 *Always*
6. careful of personal appearance	1 *Never*	2	3	4	5 *Always*
7. finds daily life interesting	1 *Never*	2	3	4	5 *Always*
8. is in poor health	1 *Never*	2	3	4	5 *Always*
9. likes to read the newspaper or books	1 *Never*	2	3	4	5 *Always*
10. makes frequent use to the telephone	1 *Never*	2	3	4	5 *Always*

Perhaps you have other items which relate to the participants' lives which you feel might be worth commenting on. If so, please write these in below.

11._____	1 *Never*	2	3	4	5 *Always*
12._____	1 *Never*	2	3	4	5 *Always*
13._____	1 *Never*	2	3	4	5 *Always*

Appendix C

Quality of life and health observations questionnaires

Participants of Trial 2 completed the two pages quality of life questionnaire. The research assistant completed the heath observations questionnaire. (Text reference page 11 and page 15.)

Confidential Questionnaire

Mark an X in one box in each line

Mental Stimulation

I like learning about new things:	all the time	often	sometimes	occasionally	never
The topics to be discussed sound:	very interesting	interesting	okay	a bit boring	boring
Using teleconferencing equipment sounds:	terrible	not too good	okay	interesting	very interesting
The reading material sounds:	fascinating	sometimes interesting	okay most of the time	could be improved	terrible
The teleconferences sound:	really well organised	well organised	okay	a bit disorganised	very disorganised
I am unsure what is expected of me:	all of the course	most of the course	for some of the course	occasionally	never
I'm involved in this program because:	it really interested me	to help others	something to do	someone suggested it to me	nothing else to do
My normal daily life is:	very boring	boring	average	good	very good
The things I have to do each day mean I have:	a very busy life	a busy life	average	not enough to do	not nearly enough to do
The length of this pilot program sounds:	too long to keep me interested	a bit too long	about right	a bit too short	far too short

Social Contact

How would you describe your social life:	very satisfying	good most of the time	good sometimes	mainly poor	very poor
My daily routine is:	very boring	boring	average	satisfying	very satisfying
I have contact with other people:	all day, every day	a few times a day	once a day	every couple of days	once a week or less often
I feel happier when I go out and meet people:	strongly disagree	disagree	sometimes	agree	strongly agree

I would prefer to meet people rather than use telephone:	strongly agree	agree	neutral	disagree	strongly disagree
How would you describe your family life:	very full, active and satisfying	good most of the time	good sometimes	unsatisfactory	I have no family, or none nearby
Compared to others of my age, my life is:	very full and happy	satisfactory	average	unsatisfactory	very unsatisfactory
I feel that I meet other people:	too often	very often	as often as I want	not enough	nowhere near enough

Present State of Health

When it comes to taking care of myself, I:	totally depend on others	often depend on others	sometimes depend on others	am usually independent	am always independent
I visit my doctor:	twice or more a week	every fortnight	about once a month	rarely	almost never
I feel pain:	all the time	sometime each day	sometimes	seldom	never
Compared to others of my age I am:	very healthy	healthier than most	about average	a little less healthy	a lot less healthy
I have minor health problems:	all the time	every day	about once a week	about every 2-4 weeks	almost never
I feel better when I have something to do:	no, it makes no difference	not usually	sometimes	takes my mind off	usually
In the last 6-7 weeks my health has been:	much worse than usual	a bit worse than usual	about the same as usual	a little better than usual	a lot better than usual
Which support group do you have contact with?:	nursing	meals on wheels	home help	family and neighbours	others
In November I visited my doctor:	more than twice a week	twice a week	more than once a fortnight	every 2-4 weeks	about once a month
In November my nurse visited me:	more than twice a week	twice a week	more than once a fortnight	every 2-4 weeks	about once a month

Objective Health Measures

B.P. _____

Pulse _____

Mobility

Totally immobile ☐	limited mobility ☐	walks with aid ☐	walks slowly ☐	drives a car ☐

Dependency Status

unable to do any-thing for self, eg toilet, feeding etc ☐	needs assistance in all daily activities ☐	needs some assistance with daily living activities ☐	needs some outside assistance, eg mow ☐

Subjective

Carers Stress Levels (1 –> 5)

1. very high ☐	2. high ☐	3. average ☐	4. low ☐	5. very low ☐

Level of Emotional Dependence

1. very high ☐	2. high ☐	3. average ☐	4. low ☐	5. very little ☐

Level of Physical Dependence (1 –> 5)

1. very high ☐	2. high ☐	3. average ☐	4. low ☐	5. very little ☐

Psychological

Depressed/contented _____

Grieving _____

Positive/negative outlook _____

Motivated _____

General Interviewer Comments

_____

_____

_____

_____

_____

_____

_____

_____

Appendix D

Health status of participants of Trial 2

(Text reference page 13.)

Health status of participants

Health status	Number of participants
Chronic health problems	16
More than one chronic health problem	13
Use of aids *	14
Use of HACC Services	18

* Mobility and mechanical aids, including one on continuous oxygen and another in a motorised wheelchair

All eighteen participants involved in the project had a disabling health problem. Of these, 72% had more than one chronic problem, which further reduced their functional abilities. While 78% had a medical and/or musculo-skeletal problem which had restricted their lifestyle in some way, 44% had a condition which severely curtailed their daily activities. For example, one person required the use of continuous oxygen, another was virtually immobilised due to a spinal problem, and one person, (the youngest) had a major physical handicap, affecting gait and speech. He was mobile only with the use of a motorised wheelchair or crutches. Reduced mobility due to a muscular skeletal condition was a major problem for 39% of the sample. These people had types of arthritis of varying severity, which was either a major cause of their disability or secondary to another health problem. Of the total participants, 56% used either one or two walking sticks, and two (11%) were mobile only with the aid of a walking frame. One of these latter people also wore a caliper. One person was totally housebound due to the need to be constantly near oxygen equipment. Visual and hearing problems were also common amongst the participants, 3 (17%) of whom had moderate/severe hearing loss (requiring hearing aids). Four others (22%) complained of marked visual deterioration.

General measures of physical health status were taken, such as blood pressure and pulse. Twenty-seven per cent felt pain all the time. The general level of the participants' health can be estimated by the following data.

Frequency of Doctors' Visits

Visits to doctor	Number of participants
Once a fortnight	4 (22%)
Once monthly	10 (56%)
Every three months	2 (11%)
Rarely	2 (11%)

Ability to attend to household chores

Task	Number of participants
Light household	15 (83%)
Gardening	3 (17%)
Heavy household	7 (39%)
Shopping	5 (28%)

(Light household duties included dusting and washing dishes.
Heavy household duties included vacuuming and laundry.
Shopping excludes those who used phone and delivery system for shopping.)

Formal Instrumental Support

Support	Number of participants
Meals on Wheels	9 (50%)
Community Nurses	6 (33%)
Home Help	16 (88%)
Day Care	8 (44%)
Other *	1 (5%)

*attending physiotherapy at day care centre.

Despite some measures of self reliance, there was a heavy dependence on support services; 100% of the sample were dependent on at least one HACC support service. The majority (88%) required home help for the heavier household duties, such as vacuuming, cleaning and laundry. Fifty per cent of the group required Meals on Wheels on a daily or three times weekly basis, and 17% required three support services (Meals on Wheels, Home Help and Domiciliary Nursing). One person attended an outside physiotherapy service. In some instances the family played a significant role and assisted with housework and maintenance, in addition to formal support services.

Levels of family support. Half of the participants were able to depend on the support of family members who visited regularly and also assisted with housekeeping. Only one person lived with his family. For the rest of the sample, family support was either infrequent (four participants) or non-existent. For example, one person had family members interstate who visited her only once a year and relied on phone contact in between. Changes in family circumstances sometimes altered the regularity of the visits. One person had regular weekly contact with the family but during the project period, the family was away for a year.

Type of family support

Family support	Number of participants
Instrumental *	9 (50%)
Regular visits	9 (50%)
Infrequent visits	2 (11%)
Mainly phone calls	2 (11%)

* family assisted with household chores, e.g.. shopping, housework, and gardening.

Social (Informal) Support

Type of support	Number of participants
Family only	9 (50%)
Family and friends/neighbours	3 (17%)
Friends/neighbours only	2 (11%)
No family or friends/neighbours	4 (22%)

Four participants (22%) had no family support and also had few friends or neighbours to depend on. The extent to which a person was housebound and vulnerable became more apparent when little or no family support was evident and the aged person had few friends or supportive neighbours.

Appendix E

Program of activities for Trial 2

(Text reference page 11.)

Programme

		U3A Tutor
Jan 3	Group morning tea Introductions. Discussion of the programme. Slide presentation	Gwenyth Clark
Jan 7 - 11	Introductory session. Group discussion of background and interests	Barbara Foley
Jan 13 - 18	Nutrition and health. Yvonne Lazette. Telephone talk on new ideas on healthy living for older persons in their homes	Margaret Cook
Jan 20 - 25	Current affairs. A discussion of radio, television or newspaper items which have recently been in the news and which interest you.	Jean Murdoch
Jan 27 - Feb 1	Heros and heroines. You will be mailed a short article to read about persons who have done interesting things. You can discuss your heroine with others in your group and, perhaps, talk about interesting people who influenced you personally.	Joan Dunn
Feb 3	Group morning tea Slide presentation. Any changes you would like to the programme can be discussed in this session.	Gwenyth Clark
Feb 3 - 8	Theatre and drama in the 50s and 60s. Don Batchelor. Don has worked with older persons in the 'Prime of Life' programme run through the Performing Arts Centre.	
Feb 10 - 15	Changes in Australian society. What are your views on royalty, the flag, music, TV, immigration etc. etc. This is your chance to talk about things which worry you or interest you about the way we are changing.	Carmel O'Keeffe
Feb 17 - 22	Poetry from our youth. Margaret Collins is interested in the types of poems, limericks, nursery rhymes and hymns which we may have learned when we were young. She will read some poems to you and discuss their background.	Margaret Collins
Feb 24 - 29	Medicare and Social Services. A representative from Medicare will discuss recent changes and their importance for older persons. You can discuss how these changes affect you	Iris Gonzo
Mar 2	Final morning tea Summary of programme. Presentation of Certificates of Completion. Slide presentation.	Gwenyth Clark

Appendix F

University of the Third Age (U3A)

(Text reference page 4.)

University of the Third Age (U3A)

U3A grew from an idea tested in 1972 when the University of Toulouse sponsored a summer program of lectures, study tours and cultural and leisure activities for elderly citizens, using facilities and staff at the University. Within two years the concept had proved so popular that it had spread to other areas of France and into Belgium, Poland, Spain and Italy. Although individual variations began to appear, the emphasis remained on learning for its own sake, with abandonment of entry qualifications, examinations, awards, and other traditional institutional impediments to participation by the aged. Fees were nominal.

Once U3A is introduced to a country it seems to spread very rapidly. The first Australian U3A campus began classes in Melbourne in 1985, under the sponsorship of the Australian and Victorian Councils On The Ageing, and Monash University. Other U3A campuses soon appeared. By March 1992, some 90 independent U3A groups were providing courses and other activities in all Australian States and Territories, for an estimated membership of almost 16,000.

Despite the fact that there are now hundreds of U3A campuses internationally there is no 'preferred' model. The model adopted in a particular area appears to reflect the philosophy of sponsoring agencies and the needs of the local population. For example, in France, the home of the original U3A concept, several patterns are found. Some French U3As are entirely university-based, some are the creation of local government and are not associated with a university, and some are wholly independent associations. In Australia, U3As frequently develop under the sponsorship of a university or college but quickly become autonomous bodies, operating under their own constitution with an elected management committee. The movement is spreading so rapidly in Australia that some States have developed umbrella bodies, not to devolve management responsibilities from the independent campuses but, rather, to share ideas and to discuss matters which are common to all bodies. Some U3A groups from different States are discussing the need for a national U3A organisation.

The word "university" in the title appears to adopt greater or lesser significance, according to the local perception of the movement. Radcliffe (1982), in discussing the range of U3A models in France, noted an interest expressed by some supporters in activities such as research, which 'justifies the use of the term university' (p.11). In Australia, as with many other places, however, the word 'university' is regarded more as an historical appendage to an excellent community-based adult education concept. Indeed, some groups have argued successfully for university to be removed from the title, lest potential members should erroneously link U3A with institutions which have historically excluded all but the scholastically elite.

Although many U3A campuses in Australia evolved with university or college assistance, the community-based, do-it-yourself model typifies the philosophical underpinning of the movement in this country (Swindell, 1991). Such an approach maximizes opportunities for the continued use of the enormous pool of skills and knowledge possessed by the elderly, and minimizes the dependence on professional educators and outside funding, which characterizes most educational programs. U3As, in Australia, are run by management committees elected from the membership. The tutors are volunteer members who have an interest in a subject, be it the study of Chinese, the history of Greece, yoga, organic gardening, wood turning, computing, or whatever. They develop courses and teach these in any way, and to any level they wish, often running courses from their own homes or convenient suburban halls. Since the teaching is done without payment by members, for members, there are usually no fees other than those for course materials or perhaps the hire of special facilities. Frequently, the small annual membership fee covers any course expenses.